

Claims:

1. A double-sided image film screen having a projection structure,
comprising:
5 a transparent material made of one selected from the group consisting of
polyester, acryl and polycarbonate; and
 a light-refracting material, made of silica, contained in or deposited on the
transparent material,
 wherein a content and a particle size of the light-refracting material and a
10 thickness of the film screen mutually interact so that an image formed on the film
screen by means of light projected from a projector is dividedly displayed on front
and rear surfaces of the film screen, thereby displaying the image formed thereon
though the front and rear surfaces thereof and eliminating a hot spot.
2. The double-sided image film screen as set forth in claim 1, wherein:
15 the content (C) of the light-refracting material in the film screen is in the
range of range of 800ppm to 90,000ppm;
 the particle size (B) of the light-refracting material is in the range of $0.1\mu\text{m}$
to $50\mu\text{m}$; and
 the thickness (A) of the film screen is in the range of $10\mu\text{m}$ to $400\mu\text{m}$.
- 20 3. The double-sided image film screen as set forth in claim 1 or 2,
wherein:
 a rotary rod is installed at an upper end of the film screen; and
 the film screen is rolled up into and down from the rotary rod, and serves
as a rolled-type screen.
- 25 4. The double-sided image film screen as set forth in claim 1 or 2,
wherein the film screen is fixed to a transparent plate so that the film screen
can be transferred upward and downward by means of a rotary rod.
5. The double-sided image film screen as set forth in claim 1 or 2,
30 wherein the film screen is attached to a glass window so that viewers at

outdoor and indoor places can view the film screen through both surfaces thereof.

6. The double-sided image film screen as set forth in claim 1 or 2,
wherein a projector is installed under the film screen and a reflecting mirror
is installed in front of the projector to prepare one video system so that viewers can
5 view an image displayed on the front and rear surfaces of the film screen.

7. The double-sided image film screen as set forth in claim 1 or 2,
wherein a reflection plane is formed on one surface of the film screen so
that the film screen serves as a reflection-type screen without the generation of a hot
spot.

10 8. The double-sided image film screen as set forth in claim 1 or 2,
wherein the light-refracting material of the film screen is a light-
transmitting material made of titania (TiO_2).

9. The double-sided image film screen as set forth in any one of claims 1
to 8,

15 wherein a pigment thin film having one color, selected from the group
consisting of brown, dark blue and black, is formed on one surface of the film
screen.

10. The double-sided image film screen as set forth in claim 1 or 2,
wherein the film screen is divided into front and rear film sub-screens
20 centering on a transparent plate under the condition that the total thickness of the
film screen, the content and the particle size of the light-refracting material in the
film screen satisfy the allowable ranges.